

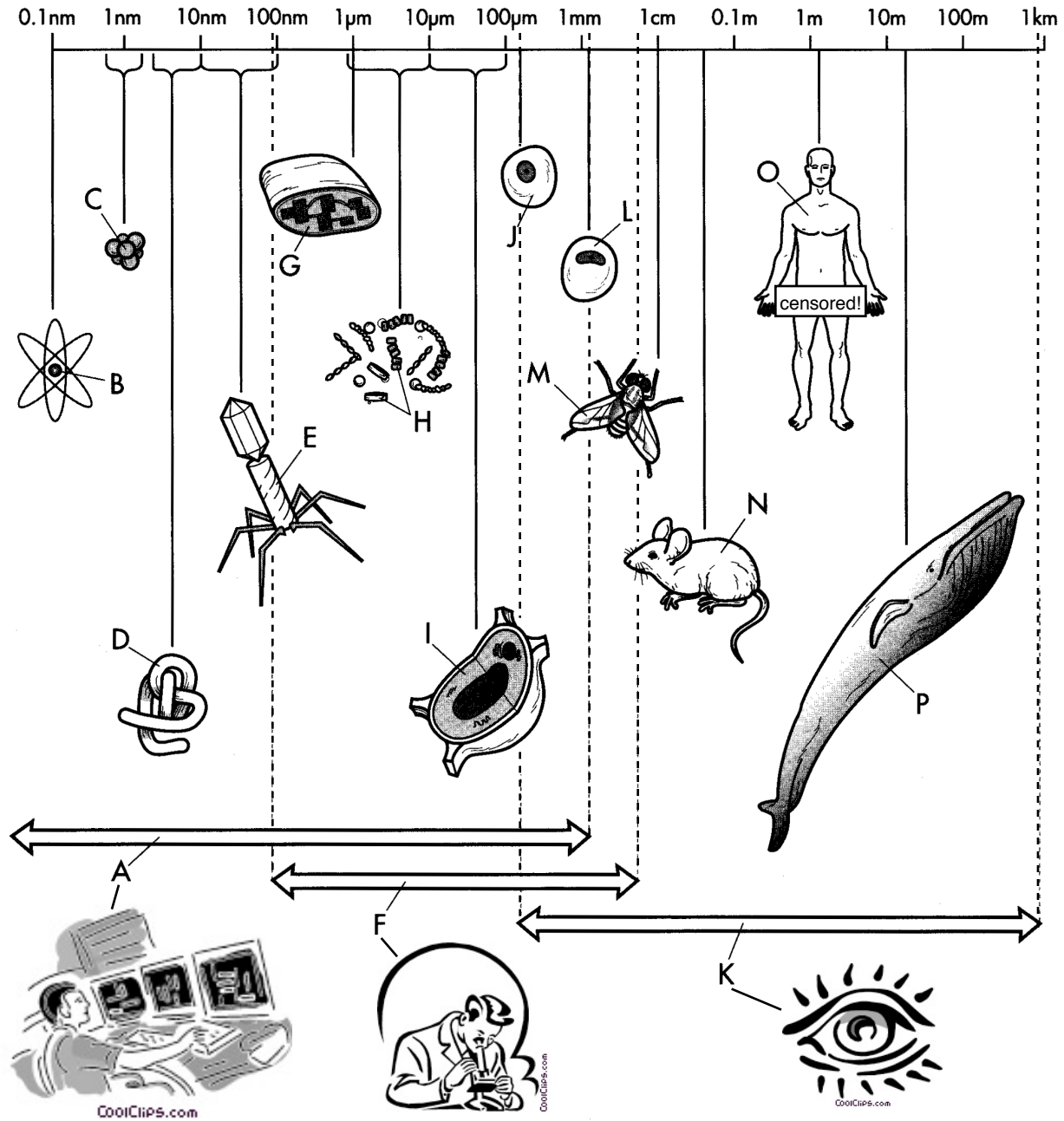
**Investigation and Experimentation**

Name: \_\_\_\_\_

**Size Relationships in Biology**

Period: \_\_\_\_\_

You will use colored pencils to color the diagram below when you follow the directions on the other page.



Size Relationships in Biology		
<input type="radio"/> Electron Microscope Range.....A	<input type="radio"/> Light Microscope Range.....F	<input type="radio"/> Unaided Eye Range.....K
<input type="radio"/> Atom .....B	<input type="radio"/> Chloroplast.....G	<input type="radio"/> Frog Egg Cell.....L
<input type="radio"/> Small Molecule .....C	<input type="radio"/> Bacteria .....H	<input type="radio"/> Insect .....M
<input type="radio"/> Folded Protein .....D	<input type="radio"/> Plant/Animal Cell.....I	<input type="radio"/> Rodent .....N
<input type="radio"/> Virus.....E	<input type="radio"/> Human Egg Cell .....J	<input type="radio"/> Human.....O
		<input type="radio"/> Whale.....P

## Investigation and Experimentation

Name:

### Size Relationships in Biology

Period:

Follow the directions below to color code the diagram on the other page. Check off each box  as you finish coloring that part of the diagram

1. Find the arrow for “Unaided Eye Range” (labeled with a K). Color the arrow, the eye, and the circle in the key blue . This means you can see the things in this range using just your eyes.
2. Find the arrow for “Light Microscope Range” (labeled with an F). Color the arrow, the picture of a scientist using a microscope, and the circle in the key yellow . This is the kind of microscope you will be using in lab.
3. Find the arrow for “Electron Microscope Range” (labeled with an A). Color the arrow, the picture of a scientist in front of computers, and the circle in the key red . This is a very fancy microscope found only in colleges and research labs.
4. Color objects B , C , and D  and their circles in the key with red. They can only be seen using an electron microscope.
5. Color objects E , G , H  and I  and their circles in the key with orange. They can be seen using either an electron microscope or a light microscope.
6. Color objects J  and L  and their circles in the key with brown. They can be seen using either type of microscope or with your eyes.
7. Color objects M , N , O , and P  and their circles in the key blue. These things are too big to fit under a microscope.

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*Answer the questions below using your newly color-coded diagram. Write the name of the object on the blank.*

1. What is the smallest thing you can see without using any microscope? \_\_\_\_\_
2. What is the largest thing you can see using a light microscope? \_\_\_\_\_
3. What two things can be seen using either a light microscope or your eyes? \_\_\_\_\_
4. What would you use to look at a small molecule? \_\_\_\_\_
5. If there was bacteria on your hands, would you be able to see it with your eyes? \_\_\_\_\_
6. What equipment will we be able to use in class to look at plant and animal cells? \_\_\_\_\_
7. What two things can be seen by your eye and both microscopes? \_\_\_\_\_
8. What is the smallest thing you could see in science class using a light microscope? \_\_\_\_\_
9. If your pet frog laid eggs in an aquarium, would you be able to see the eggs? \_\_\_\_\_
10. Why can't you see the cells of your body just by looking at your arm?  
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\_\_\_\_\_